



SPIRiT Validation Team reports its findings

by John A. Scharl

Sustainable Design and Development (SDD) became Army Policy in the year 2000 and in June 2001, the Sustainable Project Rating Tool (SPIRiT) was mandated as the method for evaluating sustainability for all Army projects starting with the FY 02 MCA program.

In June 2003, Dr. Mario Fiori, former Assistant Secretary of Army for Installations and Environment, asked the Assistant Chief of Staff for Installation Management (ACSIM), "How does the Army know when a project is SPIRiT Gold? What is the process used to assess, score and validate MILCON projects for sustainability?"

To demonstrate that the Army has a credible way to validate SDD and the SPIRiT scoring process, the ACSIM formed an evaluation team with representatives from the ACSIM, the Installation Management Agency (IMA) and the U.S. Army Corps of Engineers. The team's task was to validate the application of the SPIRiT self-assessment process used by Military Construction Project Delivery Teams (PDT), identify observations, and provide recommendations to enhance the Army's SDD/SPIRiT process.

Six projects were selected from the FY 2002 MCA program based on their DD 1391s and estimated Beneficial



John A. Scharl

Occupancy Dates closest to the end of calendar year 2003.

The following projects were evaluated:

1. Communication Facility at Fort Gordon.
2. Barracks at Fort Lewis.
3. Barracks Complex at Fort Richardson..
4. Library and Education Center at Fort Polk.
5. Child Development Center at Fort Meade.
6. Physical Fitness Center at Fort Meade.

Since the SPIRiT policy was issued after many FY 2002 projects were defined and their Program Amounts (PA) were

already established, opportunities to maximize the sustainability of these projects were, in some cases, limited. Under the circumstances, the project teams did an exemplary job of implementing the Army's SDD/SPIRiT policy. (Note: In 2003, the Assistant Secretary of Army raised the minimum sustainable goal level for MILCON projects from Bronze to Gold. Starting in FY 2006, for all MILCON projects designs initiated after March 2003 and for all future MILCON projects, the minimum SPIRiT rating is Gold. This policy applies to vertical construction and projects planned or designed under the Residential Communities Initiative.)

Team Findings. The team concluded that given an opportunity to apply SPIRiT and set sustainable goals at the inception of the project's planning and scope phase, PDTs can achieve the SPIRiT Silver level for all projects and low Gold for most projects at no increased cost.

Having the installation/garrison commander's commitment and DPW staff's participation is key to the success of any policy, especially one such as SDD, which encompasses the life cycle of Army installations and their facilities. However, the observed levels of SDD commitment, awareness and participation at ➤

(continued from previous page)

- Communicated with Iraqi power plant operators utilizing pen and pencil sketches to describe engineering details live during Video Tele-Conference (VTC).
- Provided assistance to military units in restarting power generation plants in Iraq.
- Been extra hands and minds for the Forward Engineers, providing them with a staff of experts with skills not found in military units.

How does the IAT meet the short suspense on over 500 RFIs? Through the expert assistance of our BDTs and reach-

back partners. RFIs come to the IAT via SIPRNET, NIPRNET (Non Classified Internet), phone call, or IAT Web Site. The IAT evaluates the request and confirms it falls within the guidelines of FFE, identifies the most appropriate resource to work each RFI (District, CX BDT, etc.), or whether to process by the IAT staff.

The IAT staff processes RFIs which relate to the IAT's Geographic Information System (GIS), very short suspense items, and general research assistance. If not, then the BDT on-call is notified and the RFI is sent to the BDT. The on-call BDT is rotated weekly, with each on-call BDT team prepared for 24-hour on-call status. The BDT team works with the deployed requestor to provide the requested data, information, design assistance, etc. within the required

timeframe. This usually involves working nights and weekends and, quite often, extended hours. The IAT requests estimates and reviews the estimate of work, processes funding, archives all final deliverables and coordinates responses back to the deployed requestor. The result of the archived RFI, along with guidance documents and reference data, is posted on the IAT website for future use and reference. The IAT website is available to all with SIPRNET access.

POC is Warren Neiden, (251) 694- 4031,
e-mail: warren.e.neiden@sam.usace.army.mil

Carl L. Burgamy, Jr. is the IAT Master Planner.
PWD



(continued from previous page)

SPIRiT SCORES AND RATINGS	LEWIS	RICHARDSON	POLK	GORDON	MEADE	CARROLL
Project Delivery Teams Self-Assessment Scores	31/Bronze	25/Bronze	50/Silver	68/Gold	40/Silver	32/Bronze
Validation Team's Scores	43/Silver	26/Bronze	55/Gold	70/Gold	38/Silver	28/Bronze

installations/DPWs, appears to be inconsistent at best.

Therefore, Installation Master Planners and Energy Managers need to be actively engaged in the SPIRiT assessments as early as possible in the project concept/definition phase. Master planning and energy management decisions can significantly affect the final scoring of the project.

The current approach for programming MILCON projects is primarily based on "first costs" with little or no real consideration of life-cycle savings in terms of energy, operations, maintenance, and the productivity of building occupants. This continues to be one of the greatest barriers to achieving true sustainability in Army facility projects. Present policies also limit project costs shown on the DD 1391 by prohibiting a separate line item for sustainability. Projects must stay within the DoD approved unit cost construction factors, which do not consider sustainable features.

Unfortunately, these construction programming and approval practices are significant inhibitors for installations' PDTs. If life cycle cost effective measures are considered at all, it is only when the project costs remain below the project PA. Consequently, continued application of current MILCON program policies and practices may impact achievement of higher SPIRiT Gold and Platinum ratings.

The project teams were, in most cases, very conservative in setting their SPIRiT project goals and awarding points when scoring the projects. The one exception was the Fort Gordon 'Communications Facility' project. Their project team met the holistic championing "spirit" of the Army's SDD/SPIRiT policy by applying these elements of sustainable design:

- Established an Integrated Project Team early in project's conceptual phase that included the key representatives from the Installation (DPW and building user).
- Applied and sustained a holistic plan, design and construction approach

throughout the project.

- Trained the Project Team on SDD/SPIRiT.
- Set Sustainable Goal(s) and conducted SPIRiT assessment early in the plan and concept development phase of the project.
- Updated SPIRiT score and rating through all phases of the project.
- Documented project's SPIRiT assessment/scoring rationale.

With the exception of the Fort Meade and Camp Carroll projects, the team's evaluation validated higher SPIRiT scores than any of the Project Design Teams. The altered scores resulted from differences in interpretation of the SPIRiT criteria requirements.

The Validation Team made the following recommendations:

- Establish a Process Evaluation Team to address SDD/SPIRiT Cost and Resource Issues.
- Change MILCON project program and approval process to consistently apply life cycle cost analysis so that it supports including sustainable practices and technologies in project designs.
- Require that each project presented to the Project Review Board include specific SDD features, SPIRiT score/rating, and costs.
- Incorporate SDD practices and features (SPIRiT criteria) in the Army's Facilities Standardization process, and conduct annual SDD/SPIRiT Reviews with IMA Regions, DPWs and USACE Design Districts/Project Managers.
- The Installation Management Agency (IMA) should issue SDD/SPIRiT guidance to Garrison Commanders that encourages DPW staff's participation in the project charrette planning and SPIRiT scoring process.
- Establish SDD/SPIRiT Points of Contacts at each IMA Region and Installation.
- Publish reinforcing SDD/SPIRiT guidance to IMA Regions and Garrisons.

- The Army Corps of Engineers should update the SPIRiT criteria to reflect the lessons-learned and any changes to other similar rating systems identified since the inception of SPIRiT policy.
- Provide technical guidance for typical sustainable practices and technologies, presenting implementation costs and benefits for easy use by project teams.

The Army continues to progress toward its goal of integrating SDD principles and practices into facility plan, design and construction process. By applying the Validation Team's recommendations, project teams can achieve Silver and low Gold SPIRiT ratings without additional project costs. At the same time, the Department of Defense should clarify the objectives and strategies for incorporating SDD in to the MILCON program and execution process. Some examples of these objectives include, how to capture and consider project costs for sustainable features and the corresponding life cycle cost savings.

SPIRiT will continue to be the Army's tool for measuring our project's sustainability. However, in the interim, the Army will continue to work towards a transition to the U.S. Green Building Council's Rating System - Leadership in Energy and Environmental Design (LEED).

Currently, the Army Audit Agency (AAA) is scheduled to evaluate the SPIRiT ratings of FY 2003 MCA projects and identify the cost implications of SDD. The Army is also considering having AAA validate SPIRiT project ratings on an annual basis.

The team's final report will be available on the ACSIM FD's SDD web page at <http://www.hqda.army.mil/acsimweb/fd/linksSDD.htm>.

POC is John A. Scharl, (703) 601-0700,
e-mail: john.scharl@hqda.army.mil

John A. Scharl is a general engineer in the Facilities and Housing Directorate/Policy Division, OACSIM. **PWD**